37TH CONGRESS, 2d Session. } HOUSE OF REPRESENTATIVES. { REPORT No. 23.

HARBOR DEFENCES ON GREAT LAKES AND RIVERS.

FEBRUARY 12, 1862.—Laid on the table, and ordered to be printed.

Mr. ARNOLD, from the select committee on defence of great lakes and rivers, made the following

REPORT.

The committee to which was referred so much of the President's message as refers to the defences and fortifications of the great lakes and rivers, and to which also were referred various resolutions, petitions, and memorials on this subject, having had the same under consideration, respectfully submit the following report:

The line between the United States and the British possessions in North America, running from the gulf of St. Lawrence on the east, and extending west through the river St. Lawrence, thence through Lake Ontario, Niagara river, Lake Erie, and thence westerly, through the great lakes, to and beyond the frontier settlements, presents a boundary line, running through these great lakes and rivers, of more than three thousand miles in extent.

The feeling of good neighborhood, of reciprocity of interests, and of mutual good will, had been growing up, and, with slight disturbance, had continued since the close of the war of 1812. For nearly half a century we have regarded our Canadian neighbors as our good friends, with whom we desired to establish the kindest and most intimate business, commercial, and social relations. In the great lines of railway and water communication between the east and west, combinations and connexions have been established of mutual advantage. A treaty of reciprocity has been entered into. Some of our great thoroughfares of trade and travel have not avoided the Canadian territory, all indicating a willingness to break down or disregard division lines, and to live on terms of mutual good will. During this period the few scattered and imperfect defensive works and fortifications which had been constructed on the frontier had fallen into decay, and in some instances the military reservations around our old forts had been converted into station grounds and depots of railways. We had come to regard it as scarcely within the range of possibility that we should go to war with our neighbor over the line. This very neglect of the means of defence recent events have indicated has increased the danger and liability of war; so that it seems that the best security for peace is to be prepared for war. The defence of

the great lakes and rivers, therefore, is suggested by the President to the consideration of Congress as a measure likely to promote peaceful relations between the two nations. As such, and with the sincere desire that nothing may ever disturb the peaceful relations so happily heretofore existing, and so important to the growth and development of both countries, we urge defensive measures on the consideration of Congress. The rapid advance in the prosperity of the British provinces, and more especially of the United States, since the close of the war of 1812, furnishes a striking illustration of the blessings of peace. The population of the United States in 1815 was 8,638,131; in 1860 it was 31,148,571. The States of Indiana, Missouri, Illinois, Michigan, Wisconsin, Iowa, Minnesota, and Kansas, have been admitted into the Union since that period, and in the following order:

Indiana in	1816
Illinois in	1818
Missouri in	1821
Michigan in	1837
Wisconsin in	1848
Iowa in	1846
Minnesota in	1857
Kansas in	1860

The northwestern States to-day have a population of 9,073,055.

The northwest has sprung into existence, and developed the productions of an empire since the close of the war of 1812.

It may not be improper to take a brief survey of the growth and present condition of the northwest, and its commerce, to show the value and importance of the interests we are now about to ask the government to defend. Before doing so, however, a brief description of the lakes may not be uninteresting.

Nearly midland of the North American continent there extends a vast chain of lakes and rivers, three thousand miles in extent, connected on the east, by the St. Lawrence, with the Atlantic, and Nature has provided that these vast highways of commerce may be connected by a ship canal across a narrow portage, with the Mississippi river and its tributaries on the southwest.

Lake Superior is a vast inland sea of 32,000 square miles, and 2,000 miles of coast, 420 miles long by 160 broad.

Lake Michigan, with 22,000 square miles of surface, 1,200 miles of coast, 320 miles long by 82 wide.

Lake Huron, with 24,000 square miles of surface, 2,000 miles of coast, 260 miles long by 110 broad.

Here we have three great seas of near 80,000 square miles of surface, and 5,000 miles of coast.

These bodies of water find an outlet through the river and Lake St. Clair and the magnificent straits of Detroit into Lake Erie, 90 miles from Lake Huron. Lake Erie, 250 miles long and 60 broad, discharges its waters down the Falls of Niagara into Lake Ontario, 180 miles long and 60 broad, and thence the waters of these great lakes find their way to the ocean through the St. Lawrence.

It is a very remarkable fact that the portage between these great lakes, and those streams which find an outlet in the Gulf of Mexico, is not more than eight to twelve feet above the level of Lake Michigan, and within ten miles of Chicago. The Chicago river, running into Lake Michigan, and the Desplane river, finding its way into the Mississippi through the Illinois, are within a stone's throw of each other, and, indeed, in high water, the Desplane finds an outlet into Lake Michigan, so that small boats pass directly from Lake Michigan into the Desplane. This portage between Lake Michigan and the navigable waters of the Illinois river has been cut through by the Illinois and Michigan canal, and needs but widening and deepening to open a ship channel from the Mississippi to the lakes, *the most important work for either military or commercial purposes yet suggested on this continent.* This frontier line, from the west end of Lake Superior to the St. Lawrence, is over three thousad miles in extent.

The committee now ask attention to *the growth of the northwest and its present commercial importance.*

The shores of these great lakes where now swarm the busy populations of the most active and enterprising people perhaps in the world, were, at the period of the war of 1812, covered with dark and gloomy forests filled with hostile savages. Here ranged the great Indian warrior Tecumseh, and on the shores of these waters he made the last, desperate struggle for the hunting grounds of his race, now so rich in agriculture, trade, and commerce.

The following table shows the growth in population of the northwest since 1812 :

TABLE.

Name.	When admitted.	Population.					
		1815.	1820.	1830.	1840.	1850.	1860.
United States		8, 353, 338	9, 638, 131	12, 866, 020	17, 069, 453	23, 191, 876	31, 148, 571
Ohio	Nov. 29, 1802		581, 434	937, 903	1, 519, 467	1, 980, 329	2, 339, 599
Indiana	Dec. 11, 1816		147, 178	343, 031	685, 866	988, 416	1, 350, 941
Missouri	Aug. 10, 1821		66, 596	140, 455	383, 702	682, 044	1, 182, 317
Illinois	Dec. 3, 1818		55, 211	157, 455	476, 183	851, 470	1, 711, 753
Michigan	Jan. 26, 1837		8, 896	31, 639	212, 267	397, 654	749, 112
Wisconsin	May 29, 1848				30, 945	305, 391	775, 873
Iowa	Dec. 28, 1846				43, 112	192, 214	674, 948
Minnesota	—— —, 1857					6, 077	172, 022
Pennsylvania			1, 049, 458	1, 348, 233	1, 724, 033	2, 311, 786	2, 906, 370
New York			1, 372, 812	1, 918, 608	2, 428, 921	3, 097, 394	3, 880, 735

Table showing the population of the following cities and towns from 1820 *to* 1860, *inclusive.*

Cities and towns.	1820.	1830.	1840.	1850.	1860.
Oswego, N. Y	992	2, 703	4, 665	12, 205	16, 816
Rochester, N. Y	.....	9, 269	20, 191	36, 403	48, 204
Buffalo, N. Y	.....	8, 653	18, 213	42, 261	81, 129
Dunkirk, N. Y	.....	.....	.....	.....	5, 615
Erie, Pa	635	1, 329	3, 412	5, 858	9, 419
Cleveland, Ohio	606	1, 076	6, 071	17, 034	43, 417
Toledo, Ohio	.....	.....	1, 222	3, 829	13, 768
Detroit, Mich	1, 422	2, 222	9, 102	21, 019	45, 619
Milwaukie, Wis	.....	.....	1, 712	20, 061	45, 254
Chicago, Ill	.....	.....	4, 470	29, 963	109, 263
St. Louis, Mo	10, 049	14, 049	16, 469	77, 860	160, 780

Table showing the true value of the real estate and personal property according to the seventh census, 1850, *and the eighth census,* 1860, *respectively.*

States.	Real and personal.	Real and personal.
	1850.	1860.
Indiana	$202, 650, 264	$528, 835, 371
Illinois	156, 265, 006	871, 860, 282
Iowa	23, 714, 638	247, 338, 265
Kansas*	.....	31, 327, 895
Minnesota*	.....	52, 294, 413
Missouri	137, 247, 707	501, 214, 398
Ohio	504, 726, 120	1, 193, 898, 422
Wisconsin	42, 056, 595	273, 671, 668
Michigan	59, 787, 255	257, 163, 983
	1, 126, 447, 585	3, 957, 604, 697

*No returns for 1850.

The following table shows the population and area of the northwest in 1850 and 1860. The table of population in 1850 is copied from the compendium of the United States census of 1850, page 40; the table of areas from the same documents, page 36; the table of population in 1860 from census returns:

States.	Population in 1850.	Population in 1860.	Area, in square miles.	Per cent. of increase in population.
Ohio	1,980,329	2,339,599	39,964	18.14
Indiana	988,416	1,350,479	33,809	36.63
Illinois	851,470	1,711,753	55,405	101.03
Michigan	397,654	749,112	56,243	88.38
Wisconsin	305,391	775,873	53,924	154.00
Iowa	192,214	674,948	50,914	251.14
Minnesota	6,077	162,022	34,591	2565.65
Missouri	682,044	173,317	67,380	.72
Kansas	.....	107,110	114,798	.....
Nebraska	.....	28,842	335,882	.....
Total	5,403,595	9,073,055	842,910	67.9
		5,403,595		
Increase in 10 years	.....	3,669,460		

It is estimated that of this increase 1,329,066 is the natural increment; the balance, 2,340,394, by emigration—the northwest filling up with the hardy, industrial classes coming hither from Europe and the older States.

Population of the United States in 1850, 23,191,876; in 1860, 31,429,891—increase, 35.52 per cent.

The increase of the population of the northwest during the last ten years has been 67.9 per cent., while the ratio of increase in the whole country has been 35.52. The population of the northwest by census of 1860 was 28.85 per cent., or nearly one-third. Of the total increase in the population of the country, 44.67 per cent. was in the northwest alone. An increase at the same ratio during the present decade will give the northwest in 1870 a population of 15,212,622—an increase of 6,139,567. Massachusetts, the most densely populated of all the States, has 157.8 inhabitants to the square mile. A like density of population in the northwest would give us a population of 133,011,198. A density of population equal to that of England (332 per square mile) would give an enumeration of 279,846,120.

The following table will show somewhat of the advance of the northwest in political power:

States.	Electoral vote.		Representatives in Congress.		Popular vote for President.	
	1852.	1864.	1851.	1861.	1852.	1860.
Ohio	23	21	21	19	353,428	442,441
Indiana	13	13	11	11	183,134	272,143
Illinois	11	15	9	13	155,497	339,693
Michigan	6	8	4	6	82,939	154,749
Wisconsin	5	8	3	6	64,712	152,180
Iowa	4	7	2	5	16,845	128,331
Missouri	9	11	7	9	65,586	165,518
Minnesota	.....	3	.....	1	.....	34,799
Kansas	.....	3	.....	1	.....	.....
Total	71	89	57	71	922,141	1,689,902
		71	.....	57	.....	922,141
Increase	.....	18	.....	14	.....	767,761
Total of U. States	.....	.....	234	233	3,126,398	4,662,170

The popular vote of 1852 is copied from the census compendium, (1850,) p. 50; that of 1860, from the census returns. Under the old apportionment (1850) the northwest had 24.31 per cent. of the members of the House of Representatives, or a fraction less than one-fourth. Under the census of 1860 she is entitled to 30.47 per cent., or nearly one-third. At the presidential election of 1852 the northwest cast 29.46 per cent. of the popular vote. In the presidential election of 1860 she cast 36.24 per cent. of the popular vote—more than one-third. In the electoral college in 1860 the northwest cast 23.14 per cent. of the vote for President and Vice-President. In 1864 she will cast 29.23 per cent. of all the States, if no new State is admitted in the mean time.

The following table shows the standing of the *loyal* States in respect to political power in 1852 and 1860:

	1852.	1860.
Popular vote for President	2,583,918	3,805,640
Electoral votes	205	
Under the new census	.....	210

In 1852 the northwest cast 35.68 per cent. of the popular vote for President in the loyal States, and 34.63 per cent. of the electoral vote. In 1860 she cast 44.4 per cent. of the popular vote; and in 1864 will have 40.63 per cent. of the votes of the loyal States in the electoral college.

Chicago being one of the commercial centres of the northwest, it is proper that some space should be devoted to her commerce.

The total value of imports at Chicago in 1855	$196,660,064 66
Total value of exports from Chicago in 1855	212,953,021 88
	*409,613,086 54

The value of imports into Chicago in 1860, as per Board of Trade report, was	$97,067,616 89
Value of exports for same period	72,713,957 24
Aggregate value of imports and exports	169,771,574 13

The value of the imports into Chicago in 1858, as reported by Col. Graham (Senate Doc., part 3, pp. 890, 891, 36th Congress, 1st session,) to the United States government, was	$99,032,362 12
Value of exports for same period	81,052,420 05
Aggregate value of imports and exports	180,084,782 17

The apparent deficiency in 1860, as compared with 1858, is doubtless owing to the fact that the valuation of the articles is placed higher in Colonel Graham's report than the same articles are valued by the Board of Trade in 1860, as the quantities received and shipped in the latter year greatly exceed, in most cases, those of 1858.

It is believed that the valuation of receipts and shipments in 1861 greatly exceed that of the commerce of 1860, (although the prices of produce are lower,) inasmuch as the rebellion has diverted to Chicago an immense trade which was formerly concentrated at St. Louis, Cairo, New Orleans, and other points on the Mississippi river.

The following table, prepared by Seth Catlin, esq., secretary of the Board of Trade, shows the capacity of the Chicago elevating warehouses for handling and storing grains, November 15, 1861.

Capacity for storage, bushels	6,115,000
Capacity to receive and ship per day, bushels	735,000
Capacity to ship per day, bushels	2,635,000

* See Colonel Graham's report.

Tables from the Board of Trade Report, January 1, 1861, *showing the tonnage and valuation of the vessels engaged in the commerce of the lakes in* 1859 *and* 1860.

Year.	Number and rig.	Tonnage.	Valuation.
	AMERICAN BOTTOMS.		
1859	68 steamers	46,240	$1,779,900
	48 propellers	55,657	2,217,100
	72 tugs	7,779	456,500
	43 barks	9,666	482,800
	64 brigs	30,452	456,800
	833 schooners	173,362	4,378,900
	1,198	323,156	9,811,200
	CANADIAN BOTTOMS.		
	54 steamers	21,402	989,200
	16 propellers	4,127	140,500
	17 tugs	2,921	184,800
	15 barks	5,720	134,000
	14 brigs	3,295	78,400
	197 schooners	32,198	778,300
	313	69,663	2,305,300
	1,198	323,156	9,811,200
	AMERICAN BOTTOMS.		
1860	75 steamers	47,333	2,439,840
	190 propellers	57,210	3,250,390
	44 barks	17,929	584,540
	76 brigs	21,505	484,250
	813 schooners	172,526	5,233,085
	1,216	316,503	11,992,105
	CANADIAN BOTTOMS.		
	77 steamers	25,939	1,499,680
	27 propellers	7,289	407,290
	23 barks	7,882	246,480
	16 brigs	3,815	94,380
	217 schooners	31,792	898,560
	360	76,717	3,146,390
	1,216	316,503	11,992,105
	1,576	393,220	15,138,495

The following is from the report of the Board of Trade of Buffalo:

UNITED STATES AND CANADIAN TONNAGE.

Statement of the tonnage of the northwestern lakes and river St. Lawrence, as compiled from the Marine Register of the Board of Lake Underwriters for 1861.

Description.	No.	Tonnage.	Value.	Average tons.	No. of men.	Total men.
U. STATES TONNAGE.						
Steamers	71	40,125	$1,493,300	565	25	1,775
Propellers	182	56,203	2,597,100	308	20	3,640
Barks	44	18,331	447,300	416	12	528
Brigs	70	20,613	407,600	294	11	770
Schooners	789	174,015	4,496,800	220	10	7,890
Sloops	10	345	5,750	34	4	40
Total	1,166	309,632	9,447,850	.....	.....	14,643
CANADIAN TONNAGE.						
Steamers	76	24,544	1,175,600	321	25	1,900
Propellers	21	4,748	207,800	226	20	420
Barks	18	6,787	189,500	377	12	216
Brigs	16	4,258	93,500	266	11	176
Schooners	200	30,885	752,100	154	10	2,000
Sloops	5	283	6,100	56	4	20
Total	336	71,505	2,414,600	.....	.....	3,732

Total of United States and Canadian tonnage:

Number of vessels	1,502
Total tonnage	381,137
Total value	$11,862,450
Whole number of men	18,375

The United States tonnage exceeds that of the Canadian as follows:

Excess in number of vessels	830
Excess in amount of tonnage	238,127
Excess in value	$7,033,250
Excess in number of men	10,911

Below is given the number of United States and Canadian vessels now building on the northwestern lakes and the river St. Lawrence at the present time:

Number of vessels building, January, 1862.

Rig.	Number.	Tonnage.	Value.
UNITED STATES VESSELS BUILDING.			
Steam	3	1,700	$119,000
Propeller	22	8,210	574,700
Sail	32	21,049	947,205
Total	57	30,959	1,640,905
CANADIAN VESSELS BUILDING.			
Steam	1	410	28,700
Sail	7	3,040	136,800
Total	8	3,450	165,500
Total U. States and Canadian	65	34,409	1,806,405
Present United States tonnage	1,166	309,632	9,447,850
Vessels building	57	30,959	1,640,905
Total	1,223	340,591	11,088,755
Present Canadian tonnage	336	71,505	2,414,600
Vessels building	8	3,450	165,500
Total	344	74,955	2,580,100

The following table, copied from Colonel Graham's report, (Senate Ex. Doc. No. 16, 34th Congress, 3d session, p. 405,) shows the value of the enumerated articles of merchandise and agricultural produce received at and shipped from the various collection districts, and which passed over the St. Clair flats during the year 1855:

TABLE.

Districts.	Received.	Shipped.
Chicago	$91,771,717 98	$21,928,530 91
Milwaukie	14,065,507 08	8,738,936 75
Detroit	676,764 50	21,005,936 75
Toledo*	145,325 00	.....
Cleveland†	2,354,683 50	9,247,812 15
Erie, Pa., (32,391 tons coal)	.....	116,955 00
Buffalo	2,867,407 10	76,560,000 00
Oswego	19,200 00	.....
Ogdensburg	9,940 00	.....
	111,910,545 16	139,257,160 81
		111,910,545 16
		251,167,705 97

Total value of merchandise and agricultural produce known to have passed over St. Clair flats during the 230 days of navigation in 1855, $251,167,705 97; amount per day, $1,092,033 55.

To this may be added the *tonnage* of the several districts enumerated trading over the St. Clair flats. This tonnage (*vide* Colonel Graham's report, p. 456,) in 1855, was 195,375 tons.

The first cost of these vessels, p. 408, and their equipments, amounts to $8,553,750; add value of merchandise and produce, before given, $251,167,705 50. Total capital interested in St. Clair flats in 1855, $259,721,455 50.

The total amount in money which accrued in freights over the St. Clair flats in 1855 in American vessels was $13,766,840. If this estimate is incorrect, it is because it is too low. Full fifteen per cent. of this, says Colonel Graham, p. 408, accrued from the obstructions at the flats; so that the cost to our commerce in 1855 of these obstructions was $2,064,226. Of this, $865,509 fell upon the commerce of Chicago alone. Colonel Graham (p. 404) estimatss the cost of a channel, 600 feet wide, through the flats, at $532,991 68; over $332,000 *less* than the obstructions cost the city of Chicago in that one year. He recommended the appropriation of the above amount for the following reasons:

1. The annual amount of commerce and navigation requiring a free passage over St. Clair flats, (pp. 409, 410, aggregate given above.)

* The books at *Toledo* show no shipments from that port over St. Clair flats which are not included in receipts at other enumerated ports.—(Colonel Graham's report.)

† This falls far short of the whole. It is believed that the value of the shipments from Cleveland, over St. Clair flats, was full $15,000,000.—(*Vide* Colonel Graham's report, p. 406, notes.)

2. The importance of improving the channel over the St. Clair flats as a necessary element in the military defence of our national frontier, (pp. 409, 410.)

Col. Graham's Report (Mess. and Docs., 1859–'60, part 3,) gives the following as the aggregate imports and exports *by lake* at the several lake ports in 1858:

Imports	$148,775,218 66
Exports	123,875,812 60
Total lake commerce (American) in 1858	272,651,031 26

The following shows the total commerce (by lake, *canal, and railroad)* of the various lake ports in 1858:

Imports	$456,149,482 91
Exports	374,156,880 54
Total	830,306,363 45

Table of aggregate imports and exports of lake towns for the year 1858, *compiled by Colonel Graham (Senate Doc., 1st session 36th Cong., pp.* 919—1090.)

Chicago	$180,084,782 17
Waukegan	1,265,500 10
Kenosha	1,636,265 05
Racine	9,924,297 15
Milwaukie	41,349,293 90
Sheboygan	1,002,226 00
Manitowoc	991,294 86
Michigan City	5,669,829 85
New Buffalo	588,609 30
St. Joseph	863,054 30
Grand Haven	4,702,346 46
Toledo	67,160,116 91
Sandusky	54,361,144 10
Cleveland	106,100,578 46
Erie	15,275,955 35
Dunkirk	57,327,845 90
Buffalo	202,619,298 82
Oswego	34,610,876 62
Ogdensburg	21,547,450 50

There are several other places included in Colonel Graham's statistics not embraced in the above.

Colonel Graham's report (p. 128) states that the losses on the western lakes in 1855 amounted to $2,800,000.

The report of New York Canal Commissioner Samuel B. Ruggles,

in 1859, concurred in by Canal Commissioner Charles H. Sherrill, (N. Y. Ass. Doc. 1859, on page 20,) says that in 1853 the western commerce passing through the Erie canal was $136,598,734. On page 21 the same report says, "The proportion (of forest products) already contributed by Canada and the west is more than one-third of the whole amount of the products of the forest (excluding ordinary fine wood) carried on all the canals, including even the Champlain, and the ratio is constantly and rapidly increasing in favor of the west." On page 22 of this report Mr. Ruggles says, "The west is among us, and upon us, in full vigor, defying all the power of party politicians, however persevering, to shut out the truth that within the next twenty years the property to be carried through this State to and from the west will amount at least to *twenty-five hundred millions* of dollars, if not a much larger sum." Colonel Graham unqualifiedly asserts that our lake commerce exceeds in value our foreign commerce.

The following extracts from Hunt's Merchant's Magazine, conceded to be one of our most reliable statistical journals of the country, may be interesting :

"*Westward movement of the centre of population, commerce, and of industrial power in North America.*

"In the rapidly developing greatness of North America, it is interesting to look to the future, and speculate on the most probable points of centralization of its commerce and social power. Including with our nation, as forming an important part of its commercial community, the Canadas and contiguous provinces, the centre of population, white and black, is a little west of Pittsburg, situated at the head of navigation on the Ohio river. The movement of this centre is north of west, about in the direction of Chicago. The centre of productive power cannot be ascertained with any degree of precision. We know it must be a considerable distance east and north of the centre of population. That centre, too, is on its grand march westward. Both in their regular progress will reach Lake Michigan. Is it not, then, as certain as anything in the future can be, that the central power of the continent will move to, and become permanent on, the border of the great lakes? Around these pure waters will gather the densest populations, and on their borders will grow up the best towns and cities. * * * * *

"It can scarcely admit of a doubt that the domestic commerce of North America bears a proportion as large as twenty to one of its foreign commerce.

"At the present rate of increase the United States and the Canadas, fifty years from this time, will contain over one hundred and twenty millions of people. If we suppose one hundred and five millions, and that these shall be distributed so that the Pacific States shall have ten millions and the Atlantic border twenty-five millions, there will be left for the great interior plain seventy millions. These seventy millions will have twenty times as much commercial inter-

course with each other as with all the world besides. It is obvious, then, that there must be built up in their midst the great city of the continent; and not only so, but that they will sustain several cities greater than those which can be sustained on the ocean border."

The commerce of the lakes during the past year has, in consequence of the blockade of the Mississippi, been far greater than any previous year. The trade and commerce of the lakes has been measured by the means of transportation. Every railway was pressed to its utmost capacity, and there was not a single vessel on the lakes but was in service carrying forward the products of the northwest to the seaboard. The receipts of grain at Chicago alone amount to the enormous quantity of 54,093,219 bushels. In 1860 the receipts were 36,504,772 bushels. The increase at Milwaukie and other ports has been in the same ratio.

Accurate statistics of the present commerce of the various lake towns are not at command; but the growth of Buffalo, Rochester, Erie, Cleveland, Toledo, Detroit, Milwaukie, and Chicago, are all indexes of the rapid advance of lake commerce and the agriculture of the west, and in the aggregate reach a magnitude which is entitled to the most favorable consideration of Congress.

Your committee have given but a very imperfect sketch of the wonderfully rapid growth and present importance of the northwest. It abounds in all the elements of a great and prosperous country. It has thus far been the great agricultural section, but, with its inexhaustible supplies of coal, lumber, and metals, it will ere long become a great manufacturing country. The iron and copper of Lake Superior are attracting the attention of the world.

The northwest has grown by the energy and industry of its own hardy, free people, receiving less aid from the federal treasury than any other section. Its harbors, though filled with a commerce in comparison with which that of the now rebel and lately petted and favored seaboard section sinks into insignificance, have yet been neglected, because the water on which that commerce floated *was fresh.* Its defences have been abandoned, and have fallen into decay.

As compared with the south, the northwest has literally received nothing from the national treasury.

The south has had navy yards, fortifications, custom-houses, and harbors, costing millions of dollars. There has been expended on the Gulf of Mexico and the Florida coasts more millions of dollars than the northern frontier has received thousands. The east, too, has had, and very properly, fortifications, forts, armories, navy yards, depots, arsenals, and ships. The northwest asks simply justice, but not even that at this time. In the midst of this war she asks only that some of her most important leading and exposed points be fortified and placed in a condition of defence; that an armory and foundery be established on the lakes to enable her to have the means of arming her citizen soldiers, and that navy yards be established so that naval stores may be collected.

The committee urge these defences as not less important to New England and the great middle States of New York and Pennsylvania

than to the northwest itself. The vast agricultural products of the west find their way to the Atlantic along the great canals and railways running through these States.

New York, possessing the Hudson river, (next to the Mississippi perhaps the most important river in the Union,) has expended to connect it with the lakes over forty millions of dollars. The Hudson, the New York canals, and the great lakes, have made the city of New York the commercial metropolis of the nation. It has thus been brought into water communication with all the interior, and by means of the Illinois and Michigan canal and the Illinois river there have been brought to her wharves and warehouses the agricultural products not only of the vast territory lying around the lakes, but also those of the valleys of the Mississippi and Missouri. So that the figurative orator of New England (Choate) was scarcely extravagant when he described her as holding in one hand the vast commerce of the west, while, with the other, Venice like, "she wedded the everlasting sea."

Pennsylvania also has, by her canals and railways, connected her great city of Philadelphia with these great inland seas. The security of these waters and our national supremacy on these lakes, the protection of our northern frontier, are quite as important, therefore, to the east as to the west, and it is time that the fact was recognized by the government that the shore line of the lakes, 6,250 miles in extent, is scarcely inferior in importance to the Atlantic coast. We trust that our friends of the east will recognize the fact, that the west attained its majority and that its provincial history terminated with the census of 1860. Our brethren of the east will not forget, when asked to vote for defences to these lakes, that these waters, now bearing to the ocean such vast products, have been the scene of the most brilliant naval triumphs which adorn our history.

Fully one-half of the soldiers now in the field in defence of the flag and our nationality have been drawn from the northwest. How gallantly the soldiers of Illinois, Indiana, Ohio, Michigan, Wisconsin, Minnesota, and the other northwestern States are fighting, every battle-field bears its testimony.

The republic has naturally three great systems of navigable waters. The Atlantic on the east, the lakes on the north, and the Mississippi on the west. By means of the New York canals and the Illinois and Michigan canal these are all united by water communication.

It may not be out of place in this connexion, and at this crisis in our national affairs, to recall the provisions of the ordinance of 1787, which declared "that the navigable waters of the Mississippi and the St. Lwarence, and the carrying places between them, shall be common highways, and forever free from any tax, duty, or impost thereon." This guarantee of a free outlet, east and south, the northwest will, under all circumstances and at any cost, insist upon. The value and importance of these vast water communications, the most magnificent on the globe, have been immensely increased by the network of railways, which extend from the lakes south and west, all over the vast inland, bringing to these waters the agricultural

products of more than half the continent. Chicago alone has no less than thirteen great trunk railways radiating from her as a common centre, and bringing to her docks the products of every farm between the lakes and the Rocky mountains.

PLAN OF DEFENCE.

In regard to the general plan of the defences of the lakes and northern frontier, the committee have conferred with the general commanding the army and Brigadier General Totten, of the engineers department, and have adopted, to a considerable extent, their suggestions.

We respectfully urge upon the consideration of Congress the following plan of defences of the northern frontier:

First. The establishment of shore defences at some commanding positions. This will require the erection of some new fortifications and the repair and completion of some already located.

Second. Taking into consideration the great superiority in the American merchant marine on the upper lakes (meaning all the lakes above the Falls of Niagara) in ships, steamers, and sailors, we regard our supremacy on the lakes as dependent in a great degree upon our having the means at hand of arming the merchant marine on short notice. To this end the committee recommend the establishment of a national foundery on the upper lakes, and three naval depots, one on Lake Ontario, one on Lake Erie, and the other on Lake Michigan.

Third. We earnestly recommend for military, not less than commercial purposes, the improvement of the harbors on the lakes, the dredging out and widening of the channel over the St. Clair flats.

Fourth. The enlargement of the Illinois and Michigan canal.

In regard to shore defences.

The entrance to Lake Superior is through the Sault Ste. Marie canal, a work which cost about two millions of dollars, and it is too important to be overlooked. The mineral region of Lake Superior is probably richer in iron and copper than any other in the world; and the iron has been found to be superior in quality, for many purposes, to any other known. These mines have been rapidly developed, and now constitute a most important national interest. Old Fort Brady is represented as commanding the entrance to Lake Superior, and an appropriation for its repair, or a new fort more eligibly situated for the purpose, is recommended.

A military road from *Bay de Noquet*, on Green bay, to Marquette, or some other point, on Lake Superior, and an early completion of the railroad from Appleton to Lake Superior, would afford additional communication with this great lake; and both of these are of great importance for military reasons, and are earnestly recommended to the favorable consideration of Congress. Probably the most important strategic place on the lakes is the Straits of Mackinaw. This strait con-

stitutes the door to Lake Michigan, around which lake lie the States of Michigan, Indiana, Illinois, and Wisconsin, with an aggregate of population amounting to nearly five millions. On its shores are the towns of Grand Haven, Muskegan, St. Joseph, Michigan City, Chicago, Waukegan Kenosha, Racine, Milwaukie, and Green Bay, with many others rising rapidly into importance. The commerce of this lake will exceed $200,000,000 per annum. The great granary of the union has its depots on the border of this lake. It can be defended by adequate fortifications at the Straits of Mackinaw, about three miles wide. Fortifications at the Straits of Mackinaw close the opening or entrance into this great inland sea. When the vast interests thus secured are considered, it is obvious that Lake Michigan, and all its shores and cities, should be defended on the threshold at Mackinaw. The importance of having a great inland sea, like Lake Michigan, converted into a secure harbor, where fleets and navies may be gathered in security; where may be collected magazines of arms and munitions and provisions, can scarcely be exaggerated. Lake Michigan, entirely within our own territory, unapproachable by land, and inaccessible by water by any foreign enemy, except through a narrow strait or entrance, is a position of immense importance, and the policy of closing up its entrance is too obvious to need illustration. Mackinaw should be made the Gibraltar of the upper lakes.

Upon the importance of this locality we insert the following extract from a communication of General Totten:

"As to the stronger works, I consider one at Mackinaw to be indispensable. This will be the principal watching point of the upper lakes. Here war steamers will call to refresh, to communicate with each other, to find shelter, to lie in wait, &c.

"It is hardly to be supposed that a hostile naval expedition coming out of Georgian bay would venture towards the upper lakes, or down Lake Huron, *certainly not into Lake Michigan*, while this point of observation and rendezvous is occupied by our superior squadron. The fort here must be adequate to protect this anchorage, and the defences of the island should be such as to defeat any enterprise designed to wrest it from us by superior force."

The committee are clear in their judgment that, in view of the vast importance of Mackinaw, and the interests there to be defended, the government should take immediate means to close the Straits of Mackinaw against the entrance of any hostile fleet. Fort Gratiot fully commands the entrance to Lake Huron, and should be immediately reconstructed and put in a condition to control this gate to Lake Huron. The lower entrance to the straits or river Detroit from Lake Erie is already well guarded by Fort Wayne. This should be completed and receive its armament. The report of General Totten, in which the committee concur, recommends additional appropriations and defences at Buffalo, to wit: the completion of Fort Porter, on the bluff between Buffalo and Black Rock, and the mounting of its armament, for the protection of the entrance from Lake Erie into Niagara river, and the construction of a tower and shore batteries at the mouth of Buffalo harbor; also an appropriation for Fort Niagara, the con-

struction of defensive works at the mouth of the Genesee river, and the repairs of Fort Ontario at Oswego; also, appropriations for other defensive works on Lakes Erie and Ontario and the river St. Lawrence, and for the construction of Fort Montgomery, on Lake Champlain. The committee will report bills to carry out these suggestions and recommendations.

It will be observed, in regard to Lake Ontario, that we have no access to that lake from the upper lakes except through foreign territory; our superiority in shipping, therefore, on the upper lakes, would be unavailing on Lake Ontario. It is therefore important that, in addition to the fortification of exposed points, additional provisions should be made for securing and maintaining our supremacy on that lake. The committee recommend the establishment of a naval depot on Lake Ontario for arms, munitions, and naval stores. The possession of this lake is of the utmost importance. These great arteries of trade, the Erie canal and New York Cental railroad, are within a day's march of nearly the length of Lake Ontario, and for a considerable distance within a few miles of its shores. The importance of lake defences to the State of New York has already been alluded to. It will not be forgotten that in the war of 1812 her borders were the scene of bloody battles. Buffalo, now the queen city of Lake Erie, then a small village, was burned. Oswego was captured, and Lake Champlain and Ni[illegible]a river the scene of some of the most stirring events of the war.

We should pursue no aggressive policy; on the contrary, cultivating amicable relations with all nations, yet at the same time we should look carefully to our defences.

The Secretary of State well said, "that any nation may be said to voluntarily incur danger in tempestuous seasons, when it fails to show that it has sheltered itself on the very side from which the storm may possibly come." And the President of the United States spoke wisely when he said, "it is believed that some fortifications and depots of arms and munitions, with harbor and navigation improvements at well-selected points upon our great rivers and lakes, would be of great importance to our national defence and preservation."

II.

The second proposition, in regard to the defences of the northern frontier, *is the establishment of a national foundery on the upper lakes and of naval depots.* Attention has already been called to the superiority of the American lake marine over that of Canada on the upper lakes. In 1861 the number of American vessels of all descriptions on the upper lakes was 1,166; of Canadian, 326. Our superiority was 830. Our superiority in tonnage was 238,126 tons. Our superiority in sailors, 10,911. This superiority, without arms, is unavailing, and would only invite attack, and the immense merchant marine unarmed would would furnish rich prizes to British gunboats. Great Britain has been collecti[illegible]g an abundance of the

best arms in Canada. The lakes are utterly without arms, what few there were having been taken to the Mississippi. It is therefore of the utmost importance that means of arming these vessels, and the fortifications to be constructed, should be furnished at the earliest possible period. Fortunately we have all the materials for the manufacture of arms and ordnance of the best quality at command, and skilled machinists and artisans, so that, with proper action of the government, the work of making heavy guns may be immediately begun. We insert the following extract from the official report of Messrs. Morris, of the navy, and Totton, of the army, on this point:

"Nearly all the steam vessels, and many sailing vessels, could be very soon prepared to carry heavy guns, and some of them could carry several without inconvenience. If, therefore, the government shall make deposits of ordnance and ordnance stores at convenient posts, and be prepared to officer and man the vessels which they could purchase, the naval control of these important lakes may be considered secure against any attack."

In this connexion, the committee desire to call the attention of Congress to the fact that such is the nation's need of ordnance that we are told by very high authority that it will require three years, with all the means, public and private, now at the command of the government, to furnish the ordnance necessary to arm the fortifications now constructed, or in the process of construction. The committee, therefore, earnestly recommend the immediate establishment of a foundery on the upper lakes. This foundery, the committee recommend, should be located at Chicago. Some of the reasons why, in our judgment, it should be located there, are as follows: Chicago is the great centre of the region to be supplied with arms, and facilities for cheap and rapid distribution are unequalled. She has direct water communication, by lake, and canal, and river, with every portion of the west. Thirteen great trunk railways radiate from her as a common centre, with more than 6,000 miles of railway, and upon these railroads, centring at Chicago, the government can obtain 16,000 cars for transportation. Chicago is, concededly, one of the greatest railway centres on the continent. She can obtain, by cheap and convenient water connexion, the best ores and metals for guns, and especially the inexhaustible ores of Lake Superior, which it should be the policy of the government to develop. With the best materials at command, with an abundant supply of labor and mechanical skill, Chicago, in the judgment of the committee, combines more advantages for the location than any other point.

In regard to the necessity of a manufactory of ordnance, as of primary importance to the defence of the northern frontier, the committee call the attention of Congress to the following remarks from the communication of General Totten:

"The great superiority of our steam and other merchant vessels on the upper lakes, (including Lake Erie,) any portion of which may be promptly converted into war vessels, greatly simplifies defensive arrangements on the shores of these lakes. But that this superiority may be assumed with the requisite promptitude before these means

have been surprised and destroyed by the earlier readiness of an enemy, there should be at hand, actually stored and kept in perfect condition, all the means for converting these large and swift steamers, &c., into vessels of war—that is to say, all the armament and its supplies," &c.

* * * * * * * *

"Moreover, if for want of adequate protection of this nature the towns and cities had to resort to local defence, these, in many instances, could only be made sufficient at great expense," &c.

The committee are permitted to quote the following paragraph from a communication of *General McClellan:*

"The accumulation of ordnance material in appropriate localities is highly important, and measures for the establishment of a national foundery and manufactory of small arms in the northwest should at once be taken. Chicago is a suitable point for these establishments."

Means of arming the merchant service of the lakes is thus presented as of primary importance.

The lakes are to-day naked of arms; we therefore urge the immediate establishment of this national work, and a collection of naval stores at three points—one on Lake Michigan for the upper lakes, one on Lake Erie, and one on Lake Ontario.

These measures are of the more importance because of the existence of treaty stipulations between the United States and Great Britain, limiting armed vessels in the lakes. This treaty, concluded in 1817, contains the following provisions:

"The naval force to be maintained upon the American lakes by his Majesty and the government of the United States shall henceforth be confined to the following vessels on each side, that is:

"On Lake Ontario, to one vessel not exceeding one hundred tons burden, and armed with one 18-pound cannon.

"On the waters of Lake Champlain, to one vessel not exceeding like burden, and armed with like force.

"On the upper lakes, to two vessels not exceeding like burden, and armed with like force.

"All other armed vessels on these lakes shall be forthwith dismantled, and no other vessels of war shall be built.

"If either party should hereafter be desirous of annulling this stipulation, and should give notice to that effect to the other party, it shall cease to be binding after the expiration of six months from the date of such notice."

Whether this treaty includes Lake Michigan, which is entirely *inland*, may perhaps admit of doubt.

Great Britain has, by means of her Canadian canals, facilities for bringing gunboats and vessels of war from the St. Lawrence and the ocean into the lakes. This is an advantage not to be overlooked. These advantages can only be equalized by the enlargement of the Illinois and Michigan canal. The canals around the rapids of the St. Lawrence are built to pass vessels, from the St. Lawrence to Lake Ontario, 186 feet long, 44½ feet beam, and 9 feet draught. The Welland canal, around the Falls of Niagara, connecting Lakes Ontario

and Erie, is capable of passing vessels 142 feet long, 26 feet beam, and 10 feet draught. It is understood that the British government possesses a large number of gunboats capable of being taken through these canals.

We must command the outlet of Lake Huron and the entrance into Lake Erie by Fort Gratiot and Fort Wayne, provide arms for our lake craft on the upper lakes, and by these means secure and maintain our superiority.

III.

Reference to the advantages growing out of the Canadian canals brings us to the consideration of the importance of *the enlargement of the Illinois and Michigan canal for military purposes.* It will be observed that while we are prohibited from placing vessels of war on the lakes, Great Britain can accumulate gunboats at her pleasure on the St. Lawrence, and by her canals bring them into Lake Erie. We must remedy this by widening the Illinois and Michigan canal. As early as 1822 Congress authorized the State of Illinois to open a canal through the public lands to connect the Illinois river with Lake Michigan. In 1827 a quantity of land was granted to the State of Illinois for the purpose of aiding in opening this canal.

The work was surveyed and commenced in 1836. It begins at Chicago and runs to La Salle, the head of navigation on the Illinois river, a distance of ninety miles. It was originally designed to make what was called the deep cut, which was to use Lake Michigan as a feeder. The work was more than half completed on this basis, but owing to financial difficulties the original plan was postponed, and it was completed in 1848 on the high level, and fed by the Calumet, Chicago, Desplane, Kankakee, and Fox rivers.

The realization of the grand idea of a ship canal from Lake Michigan to the Mississippi for military and commercial purposes *is the great work of the age.* In effect, commercially, it turns the Mississippi into Lake Michigan, and makes an outlet for the great lakes at New Orleans, and of the Mississippi at New York. It brings together the two great systems of water communications of our country. The great lakes and the St. Lawrence, and the canals connecting the lakes with the ocean on the east; and the Mississippi and Missouri, with all their tributaries on the west and south. This communication so vast can be effected at small expense, and with no long delay. It is but carrying out the plan of Nature. A great river rivalling the St. Lawrence in volume at no distant day was discharged from Lake Michigan, by the Illinois, into the Mississippi. Its banks, its currents, its islands and deposits can still be easily traced, and it only needs a deepening of the present channel for a few miles to reopen a magnificent river from Lake Michigan to the Mississippi.

Had this ship canal been open, its cost would have been nearly or quite saved during the past year, in the saving of the expenses of the expenditures on the Mississippi. The gunboats for the Mississippi expeditions could have been readily and cheaply obtained at

the great ship-building ports on the lakes. This canal opened, and instead of two fleets of gunboats, one for the defence of the western rivers, and the other for the defence of the lakes, you may make one fleet answer both purposes, as necessity may require. It would enable the government to concentrate the military resources of the great lakes and the Mississippi and its tributaries on either or anywhere, as occasion might require. The opening of this canal would place us on an equality with Great Britain, in enabling us to bring from the Atlantic even the means of defending the lakes and rivers. Great Britain, with a wise sagacity, expended many millions on her Canadian canals. The enlarging of the Illinois and Michigan canal will give us equal advantages at far less cost.

The military committee of this house being, as it is understood, about to report in favor of this work, we forbear to dwell upon the subject further, and will only add our hearty concurrence in their recommendation.

The improvement of the harbors of the great lakes and the widening and deepening of the channel across the St. Clair flats are of immediate and pressing importance, not less for military than commercial reasons. No great commercial interest in the world has ever grown so rapidly and with so little encouragement on the part of the government as the lake commerce. The construction of a canal around the Falls of Niagara is a work national in its character, and which but awaits the return of peace and prosperity of the country to receive the attention of Congress.

In regard to the upper Mississippi, the committee desire to call the attention of Congress to the fact that an appropriation of $50,000 was made in March, 1861, for the construction of a military post in or near the valley of the "Red River of the North," or so much thereof as might be deemed necessary by the Secretary of War. The long line of frontier between British North America and the State of Minnesota is without protection by our government, while Great Britain has two forts: one on the north shore of Lake Superior, (Fort William,) another (Fort Gary) on the "Red River of the North," about fifty miles north of the international line. In view of these facts, and of such unexpended appropriation in the hands of the Secretary of War, we trust this frontier will receive the early attention of the War Department, which, in the judgment of the committee, it is justly entitled to.

The great interests which your committee ask Congress to protect are peculiar in their position and in their relations to the republic. The northwest is *inland*. It has, as its great channels of communication to the ocean, the great rivers St. Lawrence and Mississippi, and the canals and railways connecting the lakes and the ocean. It can never consent to become isolated from either of these great outlets; no foreign territory *must ever intervene* between it and the mouth of the Mississippi. With one hand it clasps the east, and with the other it grasps the south, and *it will hold this Union together*. The northwest is as much in earnest in determination to preserve this Union as traitors are to destroy it.

The northwest believes that our nationality is worth all the blood and all the treasure which it may cost to preserve it, and she places her all of men and money at the command of the government for that purpose.

The committee will report bills to carry into effect the foregoing recommendations.

All of which is respectfully submitted.

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